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LITERATURE REVIEW ON BALANCED SCORECARD – TYPES OF RESEARCH,
DIFFICULTIES AND BENEFITS

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LITERATURE REVIEW ON BALANCED SCORECARD – TYPES OF RESEARCH, DIFFICULTIES AND BENEFITS

Abstract

The importance of alignment between business strategy and its operational performance has been increasingly studied. Several frameworks that might be appropriate to implement and manage the strategy can be found in the literature. Among these, the the Balanced Scorecard (BSC) has become the most widely used and researched method. Despite the growing interest in the BSC, an emerging body of research point that little attention has been given to the problems or difficulties associated to its implementation and some authors suggest that over 70 percent of initiatives fails. In this context, the objective of this paper is present a review, analysis, classification and codification of the literature on Balanced Scorecard (BSC). The publications were identified through a number of databases, consulting works published between 2000 and 2007. The problems with the BSC implementation are codified, presented and analysed in order to facilitate future research and applications of the method.

Key words: balanced scorecard, strategic management, strategy, strategy implementation

1. Introduction

Several attempts can be found in the literature, emphasizing the importance of effectively implementing strategy in order to improve organizational performance.

Several frameworks that might be appropriate can be found in the literature, such as the Balanced Scorecard – BSC (KAPLAN; NORTON, 1992), the Performance Pyramid (LYNCH; CROSS, 1991) and the Performance Prism (KENNERLY; NEELY, 2000).

Among these, the BSC has become the most widely used and researched method. Since its disclosure by Kaplan and Norton (1992) it has enjoyed considerable attention in literature from practitioners and academics alike. Around 60 percent of the companies on the Fortune 1000 list have had some experience using the Balanced Scorecard (SILK, 1998) and 57 percent of businesses in the United Kingdom state that they use the method (SPECKBACHER et al, 2003). The work of Kaplan and Norton reaches 57.8 percent among the most often cited works in the academic literature on performance measurement between 1991 and 1995 (NEELY, 2005).

Initially the BSC was developed as a comprehensive performance measurement system encompassing a coherent set of financial and non-financial performance measures covering different perspectives of the organization (KAPLAN; NORTON, 1992). In 1996, Kaplan and Norton started to present the BSC as a strategic management system describing management process and principles to develop and implement a strategy-focused organization (KAPLAN; NORTON, 1996). In addition to being a model that proposes to define a balanced set of organizational performance indicators, Kaplan and Norton also define it as a tool intended to communicate and manage the strategy and also as a system to control strategy (KAPLAN; NORTON, 1996, 2000)

Despite the growing interest in performance measurement, little attention has been given to the problems or difficulties associated to the implementation of performance measurement systems (BOURNE et al, 2003) and some authors suggest that over 70 percent of initiatives fail. Given the BSC benefits announced, researches has been develop looking for understanding how BSC has been introduced in industries located in different

environments, such as Hoque and James (2000), Speckbacker et al (2003) and Sandhu et al (2008).

The academy is interesting into the drivers behind the BSC dissemination and possibly in the institutionalization of a concept and practioners may be more interested what interpretations and manner of use occur (BRAAM et al, 2007).

For this reason, it is important to carry out studies to understand BSC, the purposes for which it has been used, the benefits of its applications and the difficulties in its use in order to seek solution to facilitate its application in the future. In this sense, the objective of this paper is present a review, analysis, classification and codification of the literature on BSC. The problems with the BSC implementation are codified, presented and analysed in order to facilitate future research and applications of the method.

The publications were identified through a database, consulting works published between 2000 and 2007. The publications were classified into two main groups: conceptual research and empirical research. The articles were then classified and the principal BSC information organized.

The paper is organized as follows. First we discuss the theoretial background focus on BSC as a strategic management system. Next, the research method and the data collected are presented. Finally, we draw conclusions and discuss the findings, implications and limitations of our study.

2. Background of the Balanced Scorecard

The Balanced Scorecard (BSC) developed by Kaplan and Norton (1992), results from the need to catch all the complex aspects of organisation performance and has been widely and

increasingly used in many different kinds of enterprises and organisations (EPSTEIN; MANZONI, 1998).

One of the greatest contributions of the BSC is the visualization of trade-offs among measures that allow an understanding of how performance is achieved. Moreover, the BSC leads to creating a set of performance indicators which reflect the company business strategy. These measures should reach each manager in the company and also provide the benefit of being a powerful and comprehensive tool to communicate and promote overall commitment to corporate strategy at all levels of the organisation (Epstein and Manzoni, 1998). This method proposes to summarise the leading and lagging performance indicators in a single document, from four perspectives, as described below.

Financial perspective: Checks whether company strategy is contributing to the improvement of financial results. The financial goals are related to revenue, growth and value for the shareholders. The financial objectives and measures play a dual role: they define the financial performance expected from the strategy and serve as the main goal for the objectives and measures of all the other perspectives of scorecard. According to Kaplan & Norton (2000), from this perspective the companies have two main strategies: revenue growth and productivity. The first will be reflected in the other perspectives, introducing a new revenue source from new markets, new products, and new customers; or expanding the relationship with existing customers. The productivity strategy, on the other hand, is going to be reflected in the search for efficiency in the operational activities carried out to meet the needs of the present customers. It may also include cost reduction .

Customer Perspective: demands definition as to the market segment in which the company intends to compete. The company must translate the most important customers

needs into specific measures. The purpose is to check how the company delivers effective value to the right customers. The most common defined measures are of satisfaction and results linked to the customers: satisfaction, attraction, retention and profitability.

Internal Perspective: The measures of customers and shareholders perspectives must be supported by internal processes. In this perspective, organizations identify the critical processes for achieving the aims of the two afore mentioned perspectives. The processes must create the conditions for the organization to deliver value proposals to customers and thus attract and retain the customers in its market segments, creating value for the shareholders.

Learning and Growth perspective: Only those companies able to learn are companies that are capable of increasingly better performance. The qualification of organizations occurs through investments in new equipment, in new product research and development, in systems and procedures and in company human resources.

Hauser and Katz (1998) state that “every metric, however used, will affect actions and decisions”. But, of course, choosing the right one is critical to success.

Each perspective must have its own distinct set of performance measures, which must be specific to the characteristics and needs of each company. In addition, these performance measures must reflect and materialise the company's mission and strategy (KAPLAN; NORTON, 1993).

In order to facilitate an understanding of strategy throughout the company, Kaplan and Norton (2000) proposed the Strategy Map that shows how the company can convert its

assets into the desired outcomes. The Map also allows the communication of the strategy and the process and systems to support it.

In an integrated view, the Balanced Scorecard translates knowledge, skills and systems that will be required for employees (their learning and growth) to innovate and build the correct, and efficient strategic capabilities (internal processes) to deliver specific value to the market (customers), which is likely to provide an increase in shareholder value (financial).

Due to the complexity inherent to the process of strategy implementation, the literature emphasize the importance of using models for successful execution. Prieto (2006, p. 78) defines the model for strategic alignment as the “[...] systematic representation of a set of principles and activities with the aim of promoting strategic alignment.” The model presents the variables as a theoretical structure that can point out which factors are most critical or important and how these factors are related among themselves (HREBINIAK; JOYCE, 2001; NADLER; TUSHMAN, 1980).

As being viewed as a strategic management system, the Balanced Scorecard should be able to deal with the strategic implementation problems. In this context, the proposal of the BSC is to act as a tool to communicating and controlling the strategy. In total, the scorecard is a tool whose purpose is to align the strategy expressed in the actions actually undertaken to the strategy expressed in the plan (NØRREKLIT, 2000).

Kaplan and Norton (1996) introduce four management processes in BSC implementation which are: the translating vision processes, the communication and linking process, the business planning process and the feedback and learning process.

These four processes reflect an iterative sequence of actions. Around thirty months may be necessary to achieve a stabilized managerial system, and in this each process can be revisited two or three times (KAPLAN; NORTON, 1996).

3. Methodology used in the present study

This study can be described as theoretical–conceptual, but it is specifically devoted to searching and reviewing the literature on the BSC system. To locate and acquire publications of interest the Business Source Complete Database, available on line, were consulted. It serves as a starting point and major source of empirical data. Business Source Complete is a database that contains abstracts and full texts provided for more than 7.000 titles in in all disciplines of business, including marketing, management, MIS, POM, accounting, finance and economics.

To consult the journals available in the database, the key word ‘Balanced Scorecard’ was used to search the abstracts and full text. Articles from journals were used in the analysis because they are published after passing a selection process and are evaluated according to some criteria established, as compared with articles from congresses and symposia. Articles published between 2000 and 2007 were accessed. The searches resulted in a total of 292 articles. Every abstract was checked and only articles related to BSC implementation process was selected. The filter resulted in a total of 88 abstracts. The articles was extract from the database through the folder disposable in the system. The entire article was then analysed in order to confirm the use of BSC as a strategic management system and the contribution to identify barriers to the strategy implementation.

A research conducted by Braam et al (2007) indicated consultants as a dominant group among BSC-disseminators (about 50 per cent of the authors investigated). In accordance to

the authors most of their publications are purely conceptual, relating for instance to what the BSC is, illustrating how it can be used and what pitfalls might be encountered when implementing it (BRAAM et al, 2007). For analysing this kind of publication it would be necessary take into account the content of the BSC discourse and the interpretation variety (BRAAM et al, 2007).

Considering this results, it was made an option for selecting only academic articles. The structure of the articles was checked, mainly the methodology applied. Finally a total of 16 articles was selected and then analysed.

A table adapted by Carnevalli and Miguel (2008) from Martín et al (1999) was modified to record the articles. The table was prepared to receive two groups of researches: “conceptual research” and “empirical research.” Articles whose goal was to develop theoretical–concepts work, reviews of the literature, simulations or theoretical modeling were considered to be conceptual. Empirical research included articles that had the goal of undertaking surveys, case studies, research-action or experimental research. The approach of the articles was also classified as “quantitative” or “qualitative” following Carnevalli and Miguel (2008). In the case of empirical studies the following were studied: the coverage of the study (“regional,” “national, or “international”); the unit of analysis (“persons”, “groups”, “organizational unit,” “companies”); the method of data collection (“questionnaire”, “interviews”, “document analysis,” “public data,” “press information,” and “bibliographical”), and the period analyzed only for case studies according to Voss et al., 2002 (“retrospective”, “contemporary”, and “longitudinal”). For the conceptual research group, the indirect method of data collection used (e.g., “public data”, “information published in the press”, and “bibliographical”) was also

studied. The classification of the articles was coded as shown in Appendix I, to facilitate the visualization of the results.

Content analysis (BARDIN, 2000) of the full articles recorded was applied to organize and group data of interest, classifying them according to motivation for adopting the BSC; challenges and barriers during the BSC development and implementation process, benefits gained by the organization from the BSC adoption and use; and recommendations to reduce difficulties or improve BSC implementation. The groups created by the content analysis are presented and analysed in the next section.

4. Results of the classification of the articles studied

As cited earlier, the articles were classified into “conceptual research” or “empirical research”. The articles fell in the second category what can be explained due to the objective of the study of investigating barriers related to the BSC implementation process. The studies were developed applying case study (62%) and survey (25%). It can be verified the predominance of single case studies with regional coverage and surveys performed in national coverage.

These results are not conclusive, but they are in accordance with the tendency pointed to the literature by researchers examining the BSC implementations in a particular context (BRAAM et al 2004; HOQUE; JAMES, 2000; SPECKBACKER et al, 2003). Sandhu et al. (2008) use the term “localise” to specify researches that has the objective of verifying how does the BSC become localised in an organization and what factors shape this process of localisation.

The motivation for adopting the BSC

Hoque and James (2000) found that greater BSC usage is associated with improved firm performance, what can be confirmed by the results. The most important factors that could encourage firms to adopt BSC are the following: “improving management effectiveness”; “communicating and implementing strategy”; “linking goals of corporate”, lines of business and support units”; “identifying the main target measures to management”; “mapping the firm strategy”; “BSC as a change management tool” and “identifying or improving critical success factors”.

Benefits referring to BSC adoption

The benefits gained by the organization from the BSC's adoption and use can be grouped into the following groups and subgroups: tangible benefits and intangible benefits.

- Tangible benefits referring to the implementation of a performance measurement system and the possibilities to have more control about the results of the organization, such as: “assessing the application of vision and strategy”, “translating business unit strategies into a measurement system”, “providing a comprehensive framework to translate the company's strategic objectives into a coherent set of performance measures” (ASSIRI et al, 2006; JUMANI, 2007).

- Tangible benefits referring to the operations control and improvement, such as led to more effective benchmarking and led to a tangible improvement in operations (MCADAM; WALKER, 2003; PHILLIPS, 2007), and identification of cost reduction opportunities (ANAND et al, 2005).

- Intangible benefits referring to the involvement of the people, such as 'encouraged involvement at all levels' and 'leading to increased staff acceptance of the objectives and measures' (MCADAM; WALKER, 2003).

Challenges and barriers during the development and implementation process

An emerging body of research indicates that several organizations faced difficulties in implementing BSC, employing significant human and financial resources, without achieving the desired outcomes. Kaplan (1999) states that building and embedding a BSC management system into an organization is a complicated endeavour.

The barriers founded in the research can be classified into three groups: 'BSC project difficulties', 'BSC process difficulties' and 'BSC ongoing use difficulties'. The first two classifications was suggested by Kaplan e Norton (2000a). "BSC project difficulties" are related to the conception of the BSC company and "BSC process difficulties" refers to the problems in the organizational process and are the most common causes that led to the fail in the BSC adoption.

The most frequent "**BSC project difficulties**" founded were:

- "Timely collection of the data" (KOCAKÜLÂH; AUSTILL, 2007), "determining what indicators to choosen" (ASSIRI et al 2006, KAUFMANN; BECKER, 2005), "difficulties in identifying cause-and-effect relationships" (ARNAND et al, 2005; KAUFMANN; BECKER, 2005; MALINA; SELTO, 2001) and "incomplete BSC projects" (KAUFMANN; BECKER, 2005).

According to Kaplan (1999), a significant part of the complete set of BSC measures is not available in the first months of the implementation process. However, instead of eternally

revising them in order to have the perfect beginning, organizations should start using the BSC measures and promote a continuous improvement approach.

The most frequent “**BSC process difficulties**” founded were:

- “not being able to translate strategy” (ASSIRI et al 2006; MALINA; SELTO, 2001) and “communication problems with BSC focused team” (GALAS; FORTE, 2005).

Despite the importance of the communication process, recent studies point to difficulties in making it operational. Beer and Eisenstadt (2000) list what they call the “six silent killers of strategy implementation,” outstanding among them, poor vertical communication which occurs when the culture of the organization does not favor open dialogue among hierarchical levels and the disposition on the part of top management to publicly confront the barriers that block strategy implementation (BEER; EISENSTAT, 2004). Other factors also are pointed to as indicators of whether the BSC is effective in communicating the strategy: the BSC is incorporated into the routine; it is a support for the culture of the organization; it helps transmit confidence; it provides an expansion of the dialogue about strategy (MALINA; SELTO, 2001).

- ‘Top management level commitment’ (GALAS; FORTE, 2005). Kaplan (1999a) emphasises that top management should share roles and responsibilities in order to avoid isolation during BSC implementation. In fact, the literature points to a certain lack of interest on the part of executives for the implementation process (ATKINSON, 2006; HREBINIAK; JOYCE, 2001; PRIETO; CARVALHO, 2006), and recognizes that ability in implementation by itself could be considered a source of competitive advantage (BARNEY, 2005).

Subjectivity and tension concerning performance measures can also undermine the ability of the BSC to foster communication about strategy (MALINA; SELTO, 2001). Nørreklit (2000, 2003) argues that a BSC is unable to adequately communicate the effects of time on organisational outcomes, including the time lag between achievement of some non-financial measures and their financial consequences. The effects of the measures will occur at different points of time in the different areas involved, some of them will occur immediately and others very slowly.

- “employees are unable to conceive how to contribute to improving performance”, “BSC based compensation plan does not create positive motivation”, “BSC system requires upgrading of stakeholders knowledge” (DECOENE; BRUGGEMAN, 2006)

In this sense, Kaplan (2000) stated that infrequent and poorly conceived discussions, as well as ineffective communication and education, are major barriers to employees fully understanding the company’s strategic objectives.

- “BSC requires investment to create future value”, “BSC system requires consulting services”, “a rigid hierarchical structure” and “not having a common culture”.

- “BSC ongoing use difficulties”, such as “environmental uncertainty”, “missing BSC-reviews and reporting”, “insufficient communication”, “different time perspectives” and “incomplete performance and market data” (KAUFMANN; BECKER 2005)

Support from consulting firms is usually needed due to the specificity of the concepts presented in the model and the need to deal with them as a project for the entire organization. Time and effort are required prior to the scorecarding process to clarify or set

up corporate visions and strategies, which can lead to hiring experienced professionals (KAUFMANN; BECKER 2005).

Recommendations to reduce difficulties in BSC implementation

Recommendations regarding the major difficulties mentioned above were:

- “faced BSC as a continuous process”, “looking for more and better indicators”, “ create more common definitions and indicator measurement systems” and “keeping all measurements constantly up to date”.

According to Kaplan (1999a), a significant part of the complete set of BSC measures is not available in the first months of the implementation process. However, instead of eternally revising them in order to have the perfect beginning, organizations should start using the BSC measures and promote a continuous improvement approach.

- People involvement: “top management consensus about performance indicators”, “increased involvement from senior management”, “middle management level involvement in a BSC design”, “middle management level involvement in a BSC implementation processes” and “involvement of cross-functional teams”. Hauser and Katz (1998) suggest that the use of “hard to control” metrics may create resistance to their use by the middle management level. In order to avoid this problem, these authors suggest choosing metrics that can be implemented in the short-term, but strongly linked to company long-term objectives and with a high correlation to strategy.

Independently of whether the company hires outside professionals, the coverage and multidisciplinary of the BSC require training a team to implement it. Staff involved in carrying out the BSC project must form not merely a group of functional specialists, but a

strategically focused, cross-functional and integrated team, in order to disseminate strategy and metrics throughout the organization.

5. Final considerations and perspectives for future research

The objective of this paper was to present a review, analysis, classification and codification of the literature on Balanced Scorecard (BSC) in order to identify the problems with the BSC implementation. Several problems were identified and classified as referring to BSC project, BSC process and BSC ongoing use difficulties. The results are not conclusive and could not be generalized. The methodology used in this study and the initial results can be replicated using a more extensive database, maybe including and analysing properly consultancy papers.

References

Anand, M., Sahay, B. S., Saha, S. 2005. How to profit from the balanced scorecard The Journal for Decision Makers, (30) (2), 11-25.

Assiri, A., Zairi, M., Eid, R. 2006. Industrial Management & Data Systems, (106) (7) 937-952 .

Bardin, Laurence. Análise de conteúdo. Lisboa: Edições 70, 2000, 225p.

Barney, J. R. and Mackey, T. B. 2005. "Testing resource-based theory" in: Ketchen Jr., David J. and Bergh, D. D. Research methodology in strategy and management. Elsevier, Oxford.

Beer, M. and Eisenstat, R. A. 2000, "The silent killers of strategy implementation and learning", Sloan Management Review, (41) (4), 29-40.

Beer, M. and Eisenstat, R. A. 2004. "How to have an honest conversation about your business strategy", *Harvard Business Review*, 82 No. 2, 82-89.

Braam, G. J. M., Benders, J. and Heusinkveld, S. 2007. "The balanced scorecard in the Netherlands: an analysis of its evolution using print-media indicators", *Journal of Organizational Change Management*, 20 No. 6, 866-879.

Braam, G. J.M., Nijssse, E. J. 2004. Performance Effects of Using the Balanced Scorecard: a note on the Dutch experience. *Long Range Planning*. 37 (4)

Carnevalli, Jose A., Miguel, P. C. 2008. Review, analysis and classification of the literature on QFD—Types of research, difficulties and benefits. *Int. J. Production Economics*, 114, 737– 754 .

Decoene, V., Bruggeman, W. 2006. Strategic alignment and middle-level managers' motivation in a balanced scorecard setting. *International Journal of Operations & Production Management*. (26) (4) 429-448.

Epstein, M. and Manzoni, J. F. 1998. "Implementing corporate strategy: from tableaux de bord to balanced scorecards", *European Management Journal*, 16, No. 2, 190–203.

Galas, E. S., Forte, S. H. A. C. 2005. Fatores que interferem na implantação de um modelo de gestão estratégica baseado no balanced scorecard: estudo de caso em uma instituição pública. *Revista de Administração do Mackenzie*, (6) (2), 88-111 .

Hauser, J. and Katz, G. 1998. "Metrics: you are what you measure!", *European Management Journal*, 16, No. 5, 517-528.

Hoque, Z., James, W. 2000.. Linking balanced scorecard measures to size and market factors: impact on organizacional performance. *Journal of Management Accounting Research*. 12, 1-17.

Hrebiniak, L. G. and Joyce, W. F. 2001, "Implementing strategy: an appraisal and agenda for future research" in Hitt, M., R. Freeman, E. and Harrison, J. (Eds), *Handbook of Strategic Management*, Blackwell Business, 602-626.

Juhmani, O. I.H. 2007. Usage, motives and usefulness of the balanced scorecard (bsc): evidence from bahrain. *International Journal of Business Research*. (7) (5), 106-117.

Kaplan, R. S. and Norton, D. P. 1992. "The balanced scorecard: measures that drive performance", *Harvard Business Review*, 70, (1) 71-79.

Kaplan, R. S. and Norton, D. P. 1993. "Putting the balanced scorecard to work", *Harvard Business Review*, 71, (5), 134-142.

Kaplan, R. S. and Norton, D. P. 1996. "Using the balanced scorecard as a strategic management system", *Harvard Business Review*, 74, (1), 75-85.

Kaplan, R. S. 1999. "Can bad things happen to good scorecards?" *Harvard Business School Press: Balanced Scorecard: insight, experience e ideas for strategy-focused organization report*, Article B9911D.

Kaplan, R. S. and Norton, D. P. 2000. "Having trouble with your strategy? then map it", *Harvard Business Review*, (78) (5) 167-176.

Kaplan e Norton (2000a).

Kaufmann, L. and Becker, A. 2005. "Overcoming the barriers during Implementation and use of the balanced scorecard by multinational companies in Brazil", *Latin American Business Review*, (6) (3) 39-62.

Kennerly, M. and Neely, A. 2000. "Performance measurement framework – a review", in *Performance measurement – past, present and future*, Andy Neely, Centre for Business Performance, Cranfield School of Management, Cranfield University, Cranfield, Bedfordshire, UK.

Kocakülâh, M., Austill, A. D. 2007. Balanced scorecard application in the Health Care Industry: a case study. *Journal of Health Care Finance*. (34) (1), 72-99.

Lynch, R. L. and Cross, K. F. 1991. *Measure Up!* Blackwell Publishers, London, U.K.

Malina, M.A. and Selto, F. H. 2001. Communicating and controlling strategy: an empirical study of the effectiveness of the balanced scorecard. *Journal of Management Accounting Research*, 13, p.47-90.

Martín, L.A.G. et al. 1999. El estado actual de la investigación empírica sobre economía de la empresa: Análisis de las publicaciones españolas. *Papeles de economía española* (78–79), 302–317 apud Carnevalli, Jose A., Miguel, P. C. 2008. Review, analysis and classification of the literature on QFD—Types of research, difficulties and benefits. *Int. J. Production Economics* 114, 737– 754.

Mcadam, R., Walker, T. 2003. An Inquiry into Balanced Scorecards within Best Value Implementation in UK Local Government. *Public Administration*, (81) (4), 873-892.

NADLER, David; TUSHMAN, Michael L. 1980. A model for diagnosing organizational behavior. *Organizational Dynamics*,(19) (2), 35-51.

Neely, A. 2005. "The evolution of performance measurement research: developments in the last decade and a research agenda for the next", *International Journal of Operations & Production Management*, Vol 25 (12), 1264-1277.

Nørreklit, H. 2000. "The balance on the balanced scorecard – a critical analysis of some of its assumptions", *Management Accounting Research*, 11 (1), 65-88.

Nørreklit, H. 2003. "The balanced scorecard: what is the score? a rhetorical analysis of the balanced scorecard", *Accounting, Organizations and Society*, 28 (6), 591-619.

Phillips, P. A. 2007. The balanced scorecard and strategic control: a hotel case study analysis. *Service Industries Journal*, (27) (6), 731-746.

PRIETO, Vanderli C. Análise de modelos de alinhamento estratégico interno. São Paulo: 2006. Dissertação (Mestrado em Engenharia de Produção). Programa de pós graduação em Engenharia de Produção. Escola Politécnica da Universidade de São Paulo. Departamento de Engenharia de Produção.

Prieto, V.C. et al. 2006. Critical Factors in Balanced Scorecard Implementation. *Gestão & Produção*. (13) (1), 81-92.

Sandhu, R., Baxter, J., Emsley, D. 2008. Initiating the Localisation of a Balanced Scorecard in a Singaporean Firm. *Singapore Management Review*. (30) (1), p. 25 – 41.

Speckbacher, G., Bischof, J. and Pfeiffer, T. 2003. "A descriptive analysis on the implementation of balanced scorecards in german-speaking countries", *Management Accounting Research*, 14 (4), 361-887.

Voss, C., et al., 2002. Case research: Case research in operations management. *International Journal of Operations and Production Management* 22 (2), 195–219.

APPENDIX I – Presentation of coded articles in alphabetic order

Articles	T1- Kind of study	T2-Analytic Unit	T3- Documentation
Anand, et al (2005)	C	EMP	1
Assiri et al (2006)	B, C	PE, EMP	1, 3
Bilkhu-Thompson (2003)	D		2,3
Ching-Chow, et al (2005)	D	EMP	2,3, 7
Craig & Moores (2005)	E	EMP	7
Decoene & Bruggeman (2006)	D	EMP	2
Galas & Forte (2005)	D	EMPR	1,2,3
Hueiling Chen et al (2006)	C	EMP	1
Ian Cobbold et al (2004)	D	EMPR	
Juhmani (2007)	C	EMP	1
Kaufmann & Becker, 2005	D	EMPR	
Kocakülâh & Austill (2007)	D	EMP	2,3
Malina & Selto (2001)	D	EMP	2,3
Mcadam & Walker (2003)	D	EMP	7
Mohamed (2003)	D	PE	2
Phillips, P.A. (2007)	D	EMP	2,3

T1: A-Theoretical-conceptual; B- Literature review; C-Survey; D- Case study; E- Action research; F-Experimental
T2: PE-Persons; GR-Groups; O-Organizational Unit; EMP-Companies
T3: 1- Questionnaire; 2- Interview; 3- Document analysis; 4- Public data; 5- Press information 6- Bibliography; 7- observation